

M E M O R A N D U M

May 8, 1984

TO: Susan C. Linner, Permit Supervisor

FROM: Thomas L. Portle, Reclamation Soils Specialist

SUBJECT: Chevron Resource
American Gilsonite
ACT/047/010

TOPSOIL REMOVAL - Rule M-10(14)

The Operator has provided a soil suitability chart on page 6D. The SAR figure should be amended to read less than rather than greater than. The textures should be broken out under the suitability columns rather than simply listed.

The operator has failed to utilize the topsoil tabulation chart to account for topsoil/substitute soil volumes as requested in the May 3, 1983 review letter. When the operator does fulfill this requirement please address the following items:

1. Since much topsoil has been incorporated in MSHA road berms (cross section page 5D) this volume of material shall be considered.
2. In areas where the pad was sampled for "substitute material" the depths to which sampling was done should be considered when arriving at a volume. Data sheets in Appendix 1 do not contain depth figures and volumes. Volumes are stated for Harrison 10, Independent 15 and Little Emma 6. How were these figures generated?
3. The operator was questioned regarding potential for borrow areas in the last submission in the context of topsoil/substitute material deficits. Recently (April 27, 1984) the need for a borrow area (For fire control at the landfill site) was discussed. Please respond to the borrow area in each of the above contexts and in light of the overall soil balance.

SOIL STORAGE

The operator has not addressed the protection of topsoil which is currently stored in berms. Please include the specific seed mix to be used in topsoil stockpile/berm protection.

SOIL REDISTRIBUTION AND AMENDMENTS

The operator has not discussed how soils data will be used to make fertilizer recommendations. Extensive soils data has been provided and is inclusive at abandoned sites to be reclaimed such as: Eureka 21, Little Emma 3 and 43, Pride of the West 3 and 4 and Wagonhound 11. Data is available for the facilities area and the storage pond area.

MINESITES

1. No statements regarding preparation of the seedbed (such as ripping or chiseling) is made.
2. No fertilizer is cited as being slated for application.

STORAGE POND

1. As noted above noting on seedbed preparation has been provided.
2. Similarly nothing on fertilizer requirements is addressed.

FACILITY AREA

1. 30 lbs per acre potassium should be provided.
2. Why will mulch not be provided in any of the conditions to be studied here ?

Recommendations for treatments and amendments at minesites and test locations slated for reclamation area as follows:

Little Emma 3	
Lbs/acre	Nutrient
40	N
30	P
30	K

Little Emma 4*	
Lbs/acre	Nutrient
30	P

Pride of West 3 & 4	
Lbs/acre	Nutrient
20	N
30	P
30	K

Wagonhound 11*	
Lbs/acre	Nutrient
10	N
20	P
15	K

Eureka 21
No site specific data coupled with variability in data from other Eureka sites makes it impossible to make a recommendation.

- * No data from specific minesite: recommendation, inferred from similar site.
- ** All treatment such as ripping, chiseling, scarification fertilization and mulch should be utilized and/or tested at the various reclamation test locations.

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GRADING AND SOIL PREPARATION M-3(2)(D)

Concerns relative to this question have been addressed in the applicants December 1983 submission on page 8 of 12. This information should be expanded upon to include techniques, necessary equipment and criteria for ditches, berms and contour furrows.

The operator has not specified the season of year in which soil will be re-applied or treated. Acknowledgement of seasonal limitations to redistribution due to moisture content should be added to the application.

Criteria relative to soil amendments to be provided should be discussed.

STIPULATION M-5-TLP

In light of the operators commitment relative to using results from test areas (page 10a) to clarify future reclamation techniques; should the results indicate a departure from the dollar amounts cited for bonding the bond shall be adjusted accordingly.

GENERAL COMMENTS

Why are the Organic Carbon contents so high for the minesites?

Why are the SAR and Na contents elevated on minesites and topsoil stockpiles versus the adjacent undisturbed areas? Please provide an analysis for the chemical composition of gilsonite.

The cost of fertilizer and mulch is not found in the bond calculations.

TLP/jvb
87690